

Remarks


Claims 19-36 and 38-50 have been rejected under 35 U.S.C. §112, second paragraph, as being indefinite, based on the contention that claims 19-36 are “use” claims without a method step and claims 38-50 depend from the use claims. Claims 28-29, 32, 38-41, and 43-50 have been amended and claims 19-27, 30-31, and 33-36 have been deleted, such that it is believed that the noted rejection has been obviated. Accordingly, claims 28-29, 32, and 37-50, and new claims 51-59, remain. It is believed that those claims meet the dictates of 35 U.S.C. §112, second paragraph, and so withdrawal of the rejection thereunder is respectfully requested.

Favorable reconsideration of the rejection of claim 37 as being anticipated by the Aziz article is respectfully requested. Claim 37, as amended, is directed to treatment of parasitic infestation of livestock by applying a certain type of compound *externally* to the livestock. By contrast, however, the Aziz article is directed to treating livestock for prevention of bacterial or fungal disease by adding the compound to animal feed so that the compound is ingested. Nothing in the Aziz article teaches or suggests that external application would provide any efficacy, let alone efficacy against the range of ectoparasites described in the subject specification. Nor does the Aziz article teach or suggest that the compositions may be applied externally without detrimental effect, for example, wounds or lesions that may be present on the livestock being treated. Thus, claim 37 defines patentably over the Aziz article.

All remaining claims likewise are directed to external application and so are submitted to define patentably over the Aziz article for the same reason. Indeed, some of the claims define more specifically the type of external application and so define with even more force over the Aziz article. In addition, although the Aziz article discloses treatment for certain bacterial or fungal disease, nothing in the article teaches or suggests that external application of certain compositions would provide efficacy against the parasites called for in several of the claims, and particularly against ectoparasites as required by several of the claims. Therefore, it is submitted that the claims directed more specifically to the types of parasitic infestations are patentable over the Aziz article for that reason as well.

In view of the foregoing, it is submitted that all claims now pending are in condition for allowance and favorable reconsideration of the amended claims, favorable consideration of the new claims, withdrawal of all pending rejections, and early allowance of the subject application are earnestly solicited.

Respectfully submitted,



Kenneth Solomon, Reg. #31427
Thompson Coburn LLP
One US Bank Plaza
St. Louis, Missouri 63101
Telephone: 314-552-6297
Facsimile: 314-552-7297

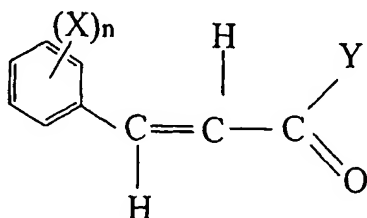
AMENDED & NEW CLAIMS

28. A method as set forth in claim 43 wherein the composition comprises an emulsifier in an amount 1 to 5 wt. %.

29. A method as set forth in claim 28 wherein 3 wt. % of the composition is emulsifier.

32. A method as set forth in claim 43 wherein the emulsion is applied as a dip that contains the active compound at a concentration of 0.1 to 10 wt.%.

37. A method of treating livestock for parasitic infestation, the method comprising external application to the livestock of a composition comprising a compound of the general formula:



wherein Y is an alkoxy group having 1 to 4 carbon atoms, a hydroxyl group, an amine group, a halide group or a nitro group; X is a hydroxyl group, an amine group, a halide group, a nitro group, an alkoxy group or an ester group and n is 0 or 1, sufficient to inhibit such parasitic infestation.

38. A method as claimed in claim 37 wherein the parasitic infestation is an infestation of a parasite selected from the group consisting of *Psorptes sp.*, *Sarcoptes sp.*, *Dermanyssus gallinae* and *Varroa jacobsoni oudemans* (*Varroa destructor*).

39. A method as claimed in claim 38 wherein the parasitic infestation is an infestation of a combination of *Psorptes sp.*, and *Sarcoptes sp.*

40. A method as claimed in claim 37 wherein the parasitic infestation is caused by the eggs of blowflies.

41. A method as claimed in claim 39 wherein the parasitic infestation is an infestation of a combination of scab mite infestations and fly strike.

42. A method as claimed in claim 37 wherein the compound is trans-cinnamic acid ethyl ester.

43. A method as claimed in claim 37 wherein the composition is a dilatable emulsion.

44. A method as claimed in claim 43 wherein the composition comprises an emulsifier selected from the group consisting of sodium lauryl sulphate, Tritox-X-100 and lecithin.

45. A method as claimed in claim 43 wherein the emulsion is applied as a spray.

46. A method as claimed in claim 43 wherein the emulsion is applied as a dip.

47. A method as claimed in claim 37 wherein the composition further comprises an oily ointment or aqueous cream and is applied topically.

48. A method as claimed in claim 37 wherein the compound is introduced into the livestock by means of a wick based evaporator whereby the compound is vaporized in a sufficient concentration to kill the parasite in the livestock but not produce toxic effects in the livestock.

49. A method as claimed in claim 37 wherein at least one other active agent is applied to the livestock in combination with the compound.

50. A method as claimed in claim 49 wherein alkyl proprionate is applied to the livestock as another active agent and in combination with the compound.

51. A method as set forth in claim 37 wherein the parasitic infestation is ectoparasitic infestation.

52. A method as set forth in claim 38 wherein the parasitic infestation is ectoparasitic infestation.

53. A method as set forth in claim 43 wherein the parasitic infestation is ectoparasitic infestation.

54. A method as set forth in claim 37 wherein the livestock being treated is infested with a parasite and the treatment destroys the parasite.

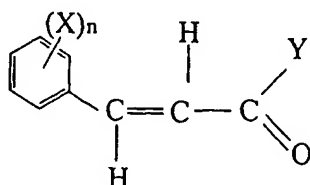
55. A method as set forth in claim 54 wherein the parasite is selected from the group consisting of *Psorptes sp.*, *Sarcoptes sp.*, *Dermanyssus gallinae* and *Varroa jacobsoni* (*Varroa destructor*).

56. A method as set forth in claim 55 wherein the parasite is a combination of *Psorptes sp.* and *Sarcoptes sp.*

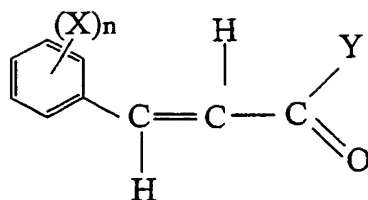
57. A method as set forth in claim 55 wherein the compound is trans-cinnamic acid ethyl ester.

58. A method as set forth in claim 37 wherein the livestock being treated is not infested at the time of treatment.

59. A method for treatment of ectoparasitic infestation of livestock, comprising applying to livestock infested with ectoparasites a composition comprising a compound of the general formula:



wherein Y is an alkoxy group having 1 to 4 carbon atoms, a hydroxyl group, an amine group, a halide group or a nitro group; X is a hydroxyl group, an amine group, a halide group, a nitro group, an alkoxy group or an ester group and n is 0 or 1, thereby destroying the ectoparasites.



wherein Y is an alkoxy group having 1 to 4 carbon atoms, a hydroxyl group, an amine group, a halide group or a nitro group; X is a hydroxyl group, an amine group, a halide group, a nitro group, an alkoxy group or an ester group and n is 0 or 1, in the preparation of a medicament for the treatment of parasitic infestations of organisms.

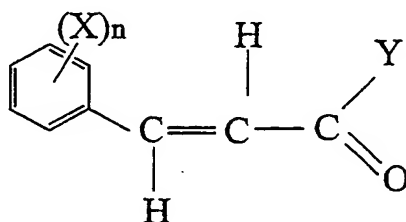
The preferred compound is *trans*-cinnamic acid ethyl ester.

The compounds of the present invention have been found to be effective against a number of different types of parasite, including mites, such as *Psoroptes cuniculi*, *Psoroptes ovis*, *Acarus siro*, *Varroa jacobsoni oudeman*, *Dermanyssus gallinae*, *Sarcoptes sp.* and *Knemido-Kopres sp* and insects, such as the eggs of blowflies, for example *Lucilia sericata*. Additionally, the compounds have been found to be effective as a fungicide. This enables the compounds to be used to treat a combination of parasitic infestations in a diverse range of organisms such as poultry, sheep and bees and simultaneously reduce and/or prevent secondary fungal infection.

The compounds may be administered in a variety of forms depending upon the intended application of the compound. For example, the compound may be provided as a dilutable emulsion, being mixed with water and/or a suitable emulsifier such as sodium lauryl sulphate or lecithin. Such an emulsion may be used as a spray to treat organisms infested with, for example, mites or blowfly eggs, such as *Lucilia sericata*, or

CLAIMS

1. Use of the compound of the general formula:-



wherein Y is an alkoxy group having 1 to 4 carbon atoms, a hydroxyl group, an amine group, a halide group or a nitro group; X is a hydroxyl group, an amine group, a halide group, a nitro group, an alkoxy group or an ester group and n is 0 or 1, in the preparation of a medicament for the treatment of parasitic infestations of organisms.

2. Use of the compound as defined in claim 1 for the treatment of mite, insect and/or fungal infestations.
3. Use of the compound as defined in claim 2 for the combined treatment of mite and insect infestations.
4. Use of the compound as defined in claim 2 or claim 3 for the treatment of mite infestations selected from the group consisting of *Psoroptes sp.*, *Sarcoptes sp.*, *Acarus Siro*, *Dermanyssus gallinae*, *Knemidokoptes sp.* and *Varroa jacobsoni oudemans*.
5. Use of the compound as defined in claim 4 for the combined treatment of *Psoroptes sp.* and *Sarcoptes sp.* infestations in livestock.

6. Use of the compound as defined in claim 2 or claim 3 for the treatment of infestations caused by the eggs of blowflies.
7. Use of the compound as defined in claim 6 when appendant to claim 4 for the combined treatment of scab mite infestations and fly strike.
8. Use of the compound as defined in claim 2 for the treatment of fungal infections selected from the group consisting of *Aspergillus nidulans*, *Penicillium digitatum*, *Rhizopus arrhizus* and *Fusarium culmorum*.
9. Use of the compound as defined in any one of claims 2 to 8 for the simultaneous treatment of fungal infections and insect and/or mite infestations.
10. Use of the compound as defined in any one of the preceding claims, wherein the compound is *trans*-cinnamic acid ethyl ester.
11. Use of the compound as defined in any one of the preceding claims wherein the compound is provided as a dilutable emulsion.
12. Use of the compound as defined in claim 11, wherein a concentrated formulation of the emulsion is at least 40 wt.% of the compound and at least 40 wt.% water.
13. Use of the compound as defined in claim 12, wherein the formulation is at least 50 wt.% of the compound.
14. Use of the compound as defined in claim 11, 12 or 13, wherein the emulsifier is sodium lauryl sulphate, Triton-X-100 or lecithin.
15. Use of the compound as defined in claim 14, wherein the emulsifier is included in an amount 0 to 5 wt.%.
16. Use of the compound as defined in claim 15, wherein 3 wt.% of the formulation is emulsifier.

17. Use of the compound as defined in any one of claims 11 to 16, wherein the emulsion is applied as a spray.
18. Use of the compound as defined in any one of claims 11 to 16, wherein the emulsion is applied as a dip.
19. Use of the compound as defined in claim 18, wherein the diluted dip emulsion contains the active compound at a concentration of 0.1 to 10%.
20. Use of the compound as defined in any one of claims 1 to 10, wherein the compound is included with an oily ointment or aqueous cream for topical application.
21. Use of the compound as defined in any one of claims 1 to 10, wherein the compound is introduced into the infested organism by means of a wick based evaporator whereby the compound is vaporized in a sufficient concentration to kill the parasite but does not produce toxic effects in the infested organism.
22. The use of the compound as defined in any one of the preceding claims in combination with other active agents.
23. The use of the compound as defined in claim 22, wherein the other agent is allyl propionate.